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Credit Issues in the Energy Markets :  
Central Counterparty Clearing

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# Institutional background of LCH I

## A. History and evolution of activity

- 1888 London, England – internationally-traded commodities
- 1981 Energy futures & options (IPE)
- 1982 Financial and equity futures & options (LIFFE)
- 1987 Non-ferrous metal futures & options (LME)
- 1995-2001 Cash equities (Tradepoint/virt-x and LSE)
- 1999 Government bonds and repos (various trading feeds)
- 1999 Interest-rate swaps (bilateral trading)
- 2002 More energy contracts (ICE and Endex)

Model : multi-product, multi-market clearing under one roof

# institutional background of LCH II

## 3. Regulatory

1988 Recognised Clearing House under new UK legislation

Designation and oversight : Financial Services Authority

2001 Derivatives Clearing Organization for OTC business

Designation and oversight : CFTC

# Central counterparty clearing : risk management model – general

- ≡ Equilibrium : more or less no change →  
A pays B and B delivers to A (typically but not invariably through/via LCH)
- ≡ Disequilibrium : counterparty of last resort →  
A does not pay B so clearing house pays B ;  
B does not deliver to A so clearing house delivers to A

# Central Counterparty Clearing : risk management model – LCH specifics I

- ≡ How does clearing house ensure it can pay & deliver in disequilibrium ?
- A. Minimum standards / requirements for those whose risk it underwrites (membership / participant standards)
- B. Market risk protection (margining, re-valuation, contingent resources)
- C. Legal framework (clarity of contractual privity, product contract terms, rulebook, default rules, insolvency protection)

# Risk management model – LCH specifics II

## Membership / participant standards

- |                                    |                     |
|------------------------------------|---------------------|
| A. Minimum capital                 | ) general comment : |
| B. Market and settlement expertise | ) clearing is cash  |
| C. Banking facilities              | ) & collateral      |
| D. Settlement facilities           | ) intensive         |

NB: LCH membership requirements allow participation by specialist trading or commodity companies as well as financial intermediaries

# Risk management model – LCH specifics III

## III Market risk protection

- A. Measurement of latent market risk → initial margin (IM) requirement collected from members (total LCH IM \$16bn)
  - B. Intra-day and end-of-day re-valuation → collection of losses and additional initial margin
  - C. Further contingent financial resources → Default Fund (cash only : \$540mn) contributions from members + default insurance (\$320mn) + own capital (\$120mn)
- B
- (i) Initial margin requirements and additional 'delivery margin' tailored to obligations linked to specific contracts
  - (ii) In the event of member default, only the defaulter's initial margin can be used, not that of non-defaulters.
- The 'mutualised' resource is the Default Fund – the defaulter's contribution to which would be used first.



# Central counterparty clearing : risk management model – LCH specifics IV

## Legal framework

- LCH and members contract as principals (no privity with any clients)
- Contractual and rulebook reinforcement of rights and obligations
- Robustness of netting, right to offset and certainty of access to margin
  - UK Companies Act 1989 (1998)
  - US Bankruptcy Code
  - UK FMIR 2000 → EU Settlement Finality Directive